



Northridge Elementary School

555 Southpark Road
Highlands Ranch, CO 80126
Principal: Elizabeth Morris

Northridge's comprehensive math curriculum is aligned to Colorado Department of Education standards and Douglas County School District Math Essential Learning Elements, and grounded in the belief that it makes little sense to teach in a "one size fits all" manner. The Northridge vision is for 100% of their students to be proficient or advanced in all

areas and that they use current research on instruction to meet this expectation. Staff members state they "begin with the end in mind" to produce student success in algebra and other higher-level math when entering middle school.

- ◆ Elementary (K-6)
- ◆ 77% White
- ◆ 10% Asian
- ◆ 10% Hispanic
- ◆ 2% Black
- ◆ 6% Free or Reduced-Price Lunch

Math is taught for 80 or more minutes a day and rigorous mathematics program goals are organized by strand and extend across all grade levels. They include strands of: number and numeration, operations and computation, data and chance, measurement and reference frames, geometry and patterns, functions, and algebra. The content in each grade provides all students with a balanced mathematics curriculum that is rich in real-world problem-solving opportunities. Students use manipulatives to visualize and understand concepts. Northridge teachers pay a lot of attention to communication in mathematics, always encouraging students to explain their reasoning while problem solving. From a teacher: "We are always asking them: 'Well, what do you mean by that? Explain your thinking.'" Special attention is paid to the development of a K-6 mathematics-related vocabulary.

Multiple assessment options include ongoing oral and written tests, open response, and self-assessment opportunities. Technology options are also available through the Internet for teacher and student use and on CD-ROM. The program provides a built-in home-school component to support remediation and extension. Students have the opportunity to participate in academic competitions: Math Olympiad, Fermie Math, Continental Math League, Destination Imagination, and Knowledge Masters.

Northridge Elementary School utilizes a wide variety of instructional methods to develop math programs focused on differentiation to improve students' learning and engagement. Each student is evaluated to determine individual developmental level using informal, curriculum-based, and criterion-referenced tests. Teachers review the needs of struggling students in weekly intervention progress team meetings and write prescriptive instructional support plans for individual students. With the support of retired teachers as instructional specialists, special education and ESL teachers, a gifted/talented facilitator, and following the Response to Intervention model,

instruction is differentiated for all students. Additionally, because Northridge is on a four-track school calendar, a “Math Camp,” staffed by paid retired teachers, is offered for off-track tutoring and support. Sixth grade offers “math boot camp” weekly for students needing extra support or an accelerated curriculum.

Staff members spend the majority of their time in staff development working on instruction and assessment, technology, Response to Intervention, and critical thinking. They are focused on continuous quality improvement and continue to reflect and revise in order to improve and guide their instruction. Larry Linnen, the district mathematics coordinator, describes the training he has provided to building administrators: “We work with administrators to think about what those [essential learnings] look like in a math classroom so they could walk in any math classroom and coach the teacher without really understanding the math. Because you could see whether or not problem solving is happening in a classroom whether or not you understand the math.”